REMARKS

The Office Action dated June 8, 2010, has been reviewed carefully and the application has been amended herein in a sincere effort to place it in condition for allowance. All objections and rejections are respectfully traversed.

Claims 30 – 31 and 33 – 48 are pending in the application. Claims 1 – 29, 32 and 49 were previously cancelled.

Statement of the Substance of the Interview

Pursuant to MPEP Section 713.04, Applicant hereby summarizes the Interview as follows: a telephonic interview was held on August 18, 2010, between Examiner Nay L. Tun, and the undersigned representative of the Applicant.

Proposed Claim Amendments were discussed, and the Applicant stated that features of the present invention regarding physical and electrical quantities being examined in a treatment cycle is novel, and not obvious in view of the cited references. The Examiner indicated that his view is that Sharood shows electrical quantities and Primm shows physical quantities. An agreement was not reached.

The Applicant's representative respectfully thanks the Examiner for granting the Interview Request.

Should the Examiner believe that a telephonic interview will further the prosecution of this Application, the Examiner is invited to please contact the undersigned at the Examiners convenience.

Claim Objections

Claims 30, 33 and 47 were objected to based upon certain informalities.

Applicant has addressed each informality as noted by the Examiner. It is respectfully submitted that the objections should be withdrawn.

Claim Rejections – 35 U.S.C.§ 112

Claim 30 – 31 and 33 – 40 were rejected under 35 U.S.C. §112. Claim 30 been amended to provide proper antecedent basis and has been amended to recite: "at least one physical quantity." Claims 38 and 40 have each been amended to recite: "said at least one physical quantity" in the lines as suggested by the Examiner and as recited in Claim 30.

Claim Rejections - 35 U.S.C. §103

Claims 30 – 31 and 33 – 48 were rejected under 35 U.S.C.§103 as being unpatentable over U.S. Patent No. 6,453,687 to Sharood et al. ("Sharood"), in view of U.S. Patent Application Publication No. 2002/0124081 to Primm et al. ("Primm") and further in view of U.S. Patent No. 5,906,234 to "Shibaki et al. ("Shibaki").

Briefly, Applicant's invention is an electric appliance monitoring device that employs components associated with the appliance and which is configured to analyze the operation and state of the monitored electric appliance, and which uses not only "external " electric quantities, but also other physical quantities (being measured directly) related to the electric appliance and sent by suitable sensing devices. (Page 2, lines 21 – 25). Applicant's claimed device has a number of sensors located at particular locations within the device. The sensors continuously detect the value of an associated physical quantity, and using a communications network transmits the sensed information using a first interface means.

Additionally, Applicant's system measures *both* physical quantity and electric

quantity. As stated in Claim 30 the monitoring device includes: a microcontroller to process measurements of the at least one physical quantity and the at least one electric quantity to determine at least one piece of information relating to the operation of the household electric appliance being employed in a treatment cycle during operation of the household electric appliance, by comparing a value of said at least one physical quantity with one or more stored predefined values. More specifically, [t]he monitoring device 9 will be able to obtain diagnostic information related to a malfunction of the washing machine 1 in the event that the microcontroller 31 verifies the existence at a particular instant in time, t*, of a combination of values of physical and/or electric quantities being significantly different (based on the evaluation logic in the microcontroller 30) from that particular combination of values of the same physical and/or electric quantities contained in the non-volatile memory 31, representing the reference combination of physical and/or electric quantities, i.e., the combination that best represents the proper operation of the washing machine 1 at that instant t*.

Thus, Applicant's invention allows that a set of physical and electric quantities can create a combination that best represents the proper operation of the washing machine at the instant in time t*. Notably, in the case of the washing machine, there are sensors that track agitation and shaking, flow rate, water level and other physical quantities In contrast, Sharood specifies a retrofit plug 125, shown in Figs. 6A - 6D, which is a plug through device that is either attached in line with the main appliance electrical supply or internally in line with a main control board interface connector of an appliance 130. Col. 8, lines 14 – 24. As such, the Sharood system cannot detect values such as agitation and weight and the like.

Based upon these distinction, Sharood alone does not disclose, teach or render obvious Applicant's invention as claimed in Claim 30 and the claims dependent thereupon.

Turning to the Primm reference, Primm specifies a method and system for network storage appliances that can be connected to provide, enhanced collaboration, scalability and reliability. Primm relates to maintaining functionality of this set of computer storage devices. Primm specifies a number of sensors monitoring the functionality and environment in the system. Specifically, Primm states that: Further, the sensors 118 may take various forms. These forms may include temperature sensors, pressure sensors, electric quality sensors, airflow sensors, microphones, cameras, video cameras, door sensors, motion sensors and network sensors, among others. Page 7, Paragraph [0109].

It is noted, however, that these sensors relate to the environment in which the network storage appliance operates. Primm does not teach *a physical quantity relating to operation of the household appliance during a treatment cycle.* Applicant's claimed invention obtains information gained from its sensors that includes physical quantities and electrical quantities relating to the operation of the household electric appliance. A microcontroller processes the measurements to determine at least one piece of information relating to the operation of the household electric appliance being employed in a particular treatment cycle during operation of the household electric appliance, by comparing an actual value of said at least one physical quantity with one or more stored predefined values each predefined value representing a threshold by which to compare the actual value to determined proper operations of the Applicant's during that particular

treatment cycle.

Primm is confined to maintaining certain conditions under which a network storage appliance is operating. Applicant's invention relates to the actual values that are measured at a particular instant in time during a treatment cycle. Applicant maintains the early position that one skilled in the art would not refer to Primm for solutions as to monitoring household appliances. Primm is in a different art from that of Applicant's invention.

With respect to the Shibaki reference, Shibaki relates to an image forming apparatus such as image copying machine for an office and such. Shibaki describes a time distance display apparatus and a time distance display method. For example, one of the steps of Shibaki's method is in step 209, in which a calculated time distance T is decremented in accordance with the progress degree of image forming operation, i.e., with the number of copies already formed. Specifically, the number of scans to be performed from the start to end of image forming operation is first calculated and then the time distance T is decremented in accordance with the number of scans already performed. Col. 7, line 63 to Col. 8, line 2. As noted, the time T in Primm serves to calculate the time it will take to perform a particular copy job.

In contrast, Applicant's device includes a timing unit 99, together with a non-volatile memory 31, which allows the device to trace the history of the monitored electric appliance, in that it permits building, in the non-volatile memory 31, profiles being indicative of trends, such as functional, statistical and diagnostic calculations from information obtained from the sensors within a predefined time period. Shibaki's system does not teach this concept.

Additionally, none of the references taken alone or in combination teaches that at a particular instant in time, t*, a combination of values of physical and/or electric quantities are measured. These actual values are then compared with stored values reflecting the correct operation of the household appliance for that same moment in time during the treatment cycle. They may be significantly different (based on the evaluation logic in the microcontroller 30) from that particular combination of values of the same physical and/or electric quantities contained in the non-volatile memory 31, which is a reference combination that best represents the proper operation of the washing machine 1 at that instant t*. If such occurs the monitoring device will store that information for later use.

Independent Claim 41 was rejected in view of Sharood. Claim 41 provides in part: where the at least one piece of information is stored as functional information, one piece of information is stored as statistical information, and one piece of stored information is diagnostic information, each of which relate to the household electric appliance, and, comparing a value of a physical quantity with one or more predefined values that relate to values for the treatment cycle being performed at a particular by the appliance, and extrapolating from said plurality of measurements of said physical quantities a data packet representative of the evolution of the physical quantity.

The Examiner indicates that the above two passages from amended Claim 41 are known in the art of communications. However, Applicant's claimed invention is not in the art of communications. Applicant's field of endeavor is that of monitoring one or more household electrical appliances. Additionally, Sharood mentions diagnostic interpretations, however, Sharood is limited in the types of information about which the

diagnostic information can provide. As noted herein, Sharood is limited by the fact that his invention is a retrofit plug that is plugged into the mains of the house.

Additionally, Sharood does not suggest extrapolating information from several physical quantities, and further does not teach generating statistical information. Based upon the foregoing, it is respectfully submitted that Sharood alone does not disclose teach or suggest Applicant's invention as claimed in independent Claim 41.

Turning to the Primm reference, Primm does not teach evaluation of various types of information regarding performance of an appliance during a treatment cycle at an instant in time, as claimed by Applicant.

As noted above, Shibaki teaches an image forming apparatus such as image copying machine for an office and such. Shibaki describes a time distance display apparatus and a time distance display method.

The combination of Sharood, Primm and Shibaki does not render Applicant's invention, as claimed in Claim 41, obvious because none of the references discloses, teaches or suggests: process measurements of the one or more physical quantities and the at least one electric quantity to determine at least one piece of information relating to or being employed in a treatment cycle during operation of the household electric appliance, and the at least one piece of information includes at least one of: functional information and statistical information relating to the household electric appliance by comparing a value of said at least one physical quantity with one or more predefined values that relate to values for the treatment being performed by the appliance during said predetermined time period, and to extrapolate from said plurality of measurements of said at least one physical quantity a data packet

representative of the evolution of said at least one physical quantity within said predefined time period.

Accordingly, it is respectfully submitted that Applicant's invention as claimed in Claim 41 and the claims that are dependent therefrom is patentable over the cited references.

Independent Claim 47 was rejected under Sharood, Primm and Shibaki. Independent Claim 47 recites in part:

the first interface means to connect to the one or more external sensors and the communication means to receive the measurements of the one or more physical external quantities and the one or more physical internal quantities,

a timing unit to associate an instant in time at which the measurements of the one or more physical quantities and the at least one electric quantity are taken,

a microcontroller configured to:

process the measurements of the one or more physical external quantities with one or more physical internal quantities, and the at least one electric quantity, at the instant in time, to determine sensed information relating to the household electric appliance, where the sensed information includes: functional information, statistical information, and diagnostic information relating to the household electric appliance said sensed information being a combination of values of at least one physical external quantity, physical internal quantity and at least one electric quantity the combination being compared with a reference combination of physical and electrical quantities that best represents the proper operation of the appliance at that instant in time.

In contrast, Sharood specifies a retrofit plug 125, shown in Figs. 6A - 6D, that is

a plug through device that is either attached in line with the main appliance electrical supply or internally in line with a main control board interface connector of an appliance 130. Col. 8, lines 14 – 24.

This does not suggest Applicant's *sensed information relating to the household electric appliance, where the sensed information includes: functional information, statistical information, and diagnostic information relating to the household electric appliance said sensed information being a combination of values of at least one physical external quantity, physical internal quantity and at least one electric quantity the combination being compared with a reference combination of physical and electrical quantities that best represents the proper operation of the appliance at that instant in time,* as stated in amended independent Claim 47.

As noted by the Examiner, Sharood does not teach a micro controller that determines at least one piece of information by comparing a value of said at least one physical quantity, with one or more predefined values that relate to values for the treatment being performed by the appliance during said predetermined time period. Thus, the features of independent Claim 47 are not disclosed taught or rendered obvious by Sharood.

Turning to the Primm reference, the Examiner cited Primm as teaching a read and write memory storing a plurality of measurements of at least one physical quantity within a predetermined time period, and an information storage means for storing the at least one piece of information in the read and write memory. The passage in Primm that is cited by the Examiner states in part that: "The storage medium may hold various operational instructions, data and other information. This information may include

networking and communications." Page 8, Paragraph [0110]. This does not teach the types of information that Applicant's system provides.

For example, Applicant's system, on the other hand, includes: *sensed information relating to the household electric appliance, where the sensed information includes: functional information, statistical information, and diagnostic information relating to the household electric appliance said sensed information being a combination of values of at least one physical external quantity, physical internal quantity and at least one electric quantity the combination being compared with a reference combination of physical and electrical quantities that best represents the proper operation of the appliance at that instant in time,* as stated in amended independent Claim 47.

This is distinct from the Primm reference in that Applicant's invention relates to functional, statistical and diagnostic information, and comparing such information with a reference combination to thus determine the proper operation of the appliance. Primm has no teaching of this concept.

Thus, Primm does not disclose teach or suggest Applicant's claimed invention.

With respect to the Shibaki reference, Shibaki relates to an image forming apparatus such as image copying machine for an office and such. Shibaki describes a time distance display apparatus and a time distance display method, as discussed above. In contrast, Applicant's storage device is non-volatile memory 31 and, though this can be managed preferably in FIFO mode, there are a number of different entries in the table as stated: The timing unit 99, together with the non-volatile memory 31, allows to trace the history of the monitored electric appliance, in that it permits to build, in the non-volatile memory 31, profiles being indicative of the trend within a predefined time period of a

particular physical quantity or typology of information obtained by the microcontroller 30 based on the values detected by the sensing device 93, 94, 95, and 96.

For these reasons, Shibaki alone does not disclose, teach or render obvious Applicant's invention as claimed in independent Claim 47. Furthermore, the combination of Sharood, Primm and Shibaki does not render Applicant's invention obvious. Even when combining Sharood's retro fit plug, with Primm's computer storage appliance with Shibaki's time distance calculation for an image copying machine still does not give rise to Applicant's claim monitoring device. None of the references alone or in combination discloses the key features of Applicant's invention including: *the first interface means to connect to the one or more external sensors and the communication means to receive the measurements of the one or more physical external quantities and the one or more physical internal quantities,*

a timing unit to associate an instant in time at which the measurements of the one or more physical quantities and the at least one electric quantity are taken,

a microcontroller configured to:

process the measurements of the one or more physical external quantities with one or more physical internal quantities, and the at least one electric quantity, at the instant in time, to determine sensed information relating to the household electric appliance, where the sensed information includes: functional information, statistical information, and diagnostic information relating to the household electric appliance said sensed information being a combination of values of at least one physical external quantity, physical internal quantity and at least one electric quantity the combination being compared with a reference combination of physical and electrical quantities that

best represents the proper operation of the appliance at that instant in time.

SUMMARY

All of the claims have been amended herein either directly or through dependency in order to enhance the claims, to better claim the invention and to clarify the distinctions which Applicant regards as the invention. It is respectfully submitted that the claims are patentable over the cited references.

All independent claims are believed to be in condition for allowance.

All dependent claims are dependent from independent claims which are believed to be in condition for allowance. Accordingly, all dependent claims are believed to be in condition for allowance.

Should the Examiner find that a telephone conversation would be further the prosecution of this application, the Examiner is invited to contact the undersigned representative of the Applicant at the Examiner's convenience.

Favorable action is respectfully solicited

Please charge any additional fee occasioned by this paper to our Deposit Account No. 03-1237.

Respectfully submitted,

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